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EXAMINER	
ALI, FARHAD	

ART UNIT	PAPER NUMBER
2446	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/750,002	ROHLAND ET AL.	
	Examiner	Art Unit	
	FARHAD ALI	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/24/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims:

Claims 1-28 are pending in this Office Action.

Claims 1 and 11 are amended.

Claims 26-28 are new.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zargham et al. (US 6,954,757 B2) in view of Story et al. (US 6,081,807).

Claim 1

Zargham teaches a system comprising:

a database ([Zargham] Column 8 Lines 34-37, "Central repository--refers to a sharable unified capacity such as the operational data store (ODS) with a relational database management system (RDBMS) in the ZLE framework"); and

a plurality of instances of an application server implementing a Java application model ([Zargham] Column 16 Lines 12-16, "The workflow service in the ZLE framework is, for example, an EJB (Enterprise Java Bean, Java 2 enterprise edition (J2EE))

compliant service running on parallel, available application servers that can store its workflow as XML data structures") coupled in a star topology with the message server at a center of the star topology, the plurality of instances sharing the database ([Zargham] Column 3 Lines 21-26, "the ZLE framework defines a multilevel architecture with a hub, wherein the enterprise applications are loosely coupled to the hub and communicating therewith via adapters" and see Column 6 Lines 53-61, "Loosely coupled applications").

Zarhgham does not disclose a message server having no persistent state such that the message server can be restarted after a failure without performing state recovery operations.

Story et al. teaches a stateless server in Column 1 lines 27-35, "The NFS protocol is defined in various standards documents, e.g., "NFS: Network File System Protocol Specifications," Sun Microsystems, Inc., RFC (Request for Comment) 1094, which is hereby incorporated by reference. The NFS protocol requires a "stateless server." This means that the state of interactions between the server and a client are not to be tracked or managed by the server during a session" in order that "if a client makes a request to a server, and after satisfying that request the server fails and is restarted, the server must be able to handle subsequent related requests from the client without needing to access state data that was lost when the server failed" (Column 1 lines 35-39).

It would have been obvious to one of ordinary skill in the art at the time to create the invention of Zargham to include the stateless server as taught by Story et al. in

order that "if a client makes a request to a server, and after satisfying that request the server fails and is restarted, the server must be able to handle subsequent related requests from the client without needing to access state data that was lost when the server failed" (Column 1 lines 35-39).

Claim 2

The modified Zargham teaches the system of claim 1 wherein each instance comprises:

a dispatcher node; and a plurality of server nodes ([Zargham] See Figure 9, ZLE framework).

Claim 3

The modified Zargham teaches the system of claim 2 wherein each server node comprises:

a java 2 enterprise edition (J2EE) engine ([Zargham] Column 16 Lines 12-16, "The workflow service in the ZLE framework is, for example, an EJB (Enterprise Java Bean, Java 2 enterprise edition (J2EE)) compliant service running on parallel, available application servers that can store its workflow as XML data structures").

Claim 4

The modified Zargham teaches the system of claim 1 further comprising:

a central lock server to provide cluster wide locks to the plurality of instances ([Zargham] Column 7 Lines 43-46, "An event may unlock or prompt the commencement of one or more business transactions. An event may lock or prompt the ending of one or more business transactions").

Claim 5

The modified Zargham teaches the system of claim 1 wherein the message server comprises:

a first data structure to store a list of connected clients; and a second data structure and a list of services provided in the system ([Zargham] Column 1 Lines 43-46, "the ZLE can integrate data related to the real time operations of the enterprise into a data storage cache, also known as operational data store (ODS)").

Claim 6

Zargham teaches a computer readable storage media containing executable computer program instructions which when executed cause a digital processing system to perform a method comprising:

starting a central services node to provide a locking service and a messaging service ([Zargham] Column 7 Lines 43-46, "An event may unlock or prompt the commencement of one or more business transactions. An event may lock or prompt the ending of one or more business transactions" and Column 6 Lines 62-67, "Tightly coupled applications—refers to applications that are not stand-alone and are tightly

integrated into the ZLE framework. Tightly integrated functionality—e.g., event capture, data extraction, rules, workflow, message transports and transformations—becomes part of the ZLE core functionality");

starting a plurality of application server instances ([Zargham] Column 16 Lines 12-16, "The workflow service in the ZLE framework is, for example, an EJB (Enterprise Java Bean, Java 2 enterprise edition (J2EE)) compliant service running on parallel, available application servers that can store its workflow as XML data structures"); and

organizing the application server instances into a cluster having star topology with the central services node at a center of the star topology ([Zargham] Column 3 Lines 21-26, "the ZLE framework defines a multilevel architecture with a hub, wherein the enterprise applications are loosely coupled to the hub and communicating therewith via adapters" and see Column 6 Lines 53-61, "Loosely coupled applications").

Zarhgham does not disclose the messaging service having no persistent state.

Story et al. teaches a stateless server in Column 1 lines 27-35, "The NFS protocol is defined in various standards documents, e.g., "NFS: Network File System Protocol Specifications," Sun Microsystems, Inc., RFC (Request for Comment) 1094, which is hereby incorporated by reference. The NFS protocol requires a "stateless server." This means that the state of interactions between the server and a client are not to be tracked or managed by the server during a session" in order that "if a client makes a request to a server, and after satisfying that request the server fails and is restarted, the server must be able to handle subsequent related requests from the client without

needing to access state data that was lost when the server failed" (Column 1 lines 35-39).

It would have been obvious to one of ordinary skill in the art at the time to create the invention of Zargham to include the stateless server as taught by Story et al. in order that "if a client makes a request to a server, and after satisfying that request the server fails and is restarted, the server must be able to handle subsequent related requests from the client without needing to access state data that was lost when the server failed" (Column 1 lines 35-39).

Claim 7

The modified Zargham teaches the computer readable storage media of claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

sharing a database among the plurality of application server instances ([Zargham] Column 8 Lines 34-37, "Central repository--refers to a sharable unified capacity such as the operational data store (ODS) with a relational database management system (RDBMS) in the ZLE framework").

Claim 8

The modified Zargham teaches the computer readable storage media of 6 containing executable computer program instructions which when executed cause a

digital processing system to perform the method wherein starting a plurality of application server instances comprises:

starting, for each application server instance of the plurality, a dispatcher node and a plurality of server nodes ([Zargham] See Figure 9, ZLE framework).

Claim 9

The modified Zargham teaches the computer readable storage media of claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

starting a message server having no persistent state (See claim 6 rejection).

Claim 10

The modified Zargham teaches the computer readable storage media of claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

registering each application server with the messaging server ([Zargham] Column 13 Lines 66-68,"The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations").

Claim 11

The modified Zargham teaches the computer readable storage media of claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

conducting inter instance communication through the messaging server ([Zargham] Column 21 Lines 53-55, "Messaging functions in the ZLE framework may involve a simple messaging scenario of an EAI-type request-response situation").

Claim 12

The modified Zargham teaches the computer readable storage media of claim 9 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

restarting the message server without state recovery responsive to a system failure (see claim 6 rejection).

Claim 13

The modified Zargham teaches the computer readable storage media of claim 10 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

notifying all registered instances from the message server when an additional instance joins the cluster ([Zargham] Column 13 Lines 66-68,"The robust message store

function supports the EAI platform for ZLE hub-based publish and subscribe operations").

Claim 14

Zargham teaches a system comprising:

means for organizing a plurality of application servers instances into a cluster having a star topology with a central services node at a center of the star topology ([Zargham] Column 3 Lines 21-26, "the ZLE framework defines a multilevel architecture with a hub, wherein the enterprise applications are loosely coupled to the hub and communicating therewith via adapters" and see Column 6 Lines 53-61, "Loosely coupled applications");

means for sharing a storage resource across the cluster; and means for performing centralized inter instances communication ([Zargham] Column 8 Lines 34-37, "Central repository--refers to a sharable unified capacity such as the operational data store (ODS) with a relational database management system (RDBMS) in the ZLE framework").

Zargham et al. does not disclose means for performing centralized inter instances communication without maintenance of persistent state information

Story et al. teaches a stateless server in Column 1 lines 27-35, "The NFS protocol is defined in various standards documents, e.g., "NFS: Network File System Protocol Specifications," Sun Microsystems, Inc., RFC (Request for Comment) 1094, which is hereby incorporated by reference. The NFS protocol requires a "stateless

server." This means that the state of interactions between the server and a client are not to be tracked or managed by the server during a session" in order that "if a client makes a request to a server, and after satisfying that request the server fails and is restarted, the server must be able to handle subsequent related requests from the client without needing to access state data that was lost when the server failed" (Column 1 lines 35-39).

It would have been obvious to one of ordinary skill in the art at the time to create the invention of Zargham to include the stateless server as taught by Story et al. in order that "if a client makes a request to a server, and after satisfying that request the server fails and is restarted, the server must be able to handle subsequent related requests from the client without needing to access state data that was lost when the server failed" (Column 1 lines 35-39).

Claim 15

The modified Zargham teaches the system of claim 14 further comprising:

means for centralized locking of a resource within the cluster ([Zargham] Column 7 Lines 43-46, "An event may unlock or prompt the commencement of one or more business transactions. An event may lock or prompt the ending of one or more business transactions").

Claim 16

The modified Zargham teaches the system of claim 14 wherein the means for performing comprises:

a message server having no persistent state (See claim 14 rejection).

Claim 17

The modified Zargham teaches the system of claim 14 wherein the means for performing comprises:

means for registering instances; and

means for recording services provided in the cluster ([Zargham] Column 13 Lines 66-68,"The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations").

Claim 18

Zargham teaches a method comprising:

starting a central services node to provide a locking service and a messaging service ([Zargham] Column 7 Lines 43-46, "An event may unlock or prompt the commencement of one or more business transactions. An event may lock or prompt the ending of one or more business transactions" and Column 6 Lines 62-67, "Tightly coupled applications—refers to applications that are not stand-alone and are tightly integrated into the ZLE framework. Tightly integrated functionality—e.g., event capture,

data extraction, rules, workflow, message transports and transformations—becomes part of the ZLE core functionality").

starting a plurality of application server instances ([Zargham] Column 16 Lines 12-16, "The workflow service in the ZLE framework is, for example, an EJB (Enterprise Java Bean, Java 2 enterprise edition (J2EE)) compliant service running on parallel, available application servers that can store its workflow as XML data structures"); and

organizing the application server instances into a cluster having star topology with the central services node at a center of the star topology ([Zargham] Column 3 Lines 21-26, "the ZLE framework defines a multilevel architecture with a hub, wherein the enterprise applications are loosely coupled to the hub and communicating therewith via adapters" and see Column 6 Lines 53-61, "Loosely coupled applications").

Zarhgham does not disclose the messaging service not maintaining a persistent state.

Story et al. teaches a stateless server in Column 1 lines 27-35, "The NFS protocol is defined in various standards documents, e.g., "NFS: Network File System Protocol Specifications," Sun Microsystems, Inc., RFC (Request for Comment) 1094, which is hereby incorporated by reference. The NFS protocol requires a "stateless server." This means that the state of interactions between the server and a client are not to be tracked or managed by the server during a session" in order that "if a client makes a request to a server, and after satisfying that request the server fails and is restarted, the server must be able to handle subsequent related requests from the client without

needing to access state data that was lost when the server failed" (Column 1 lines 35-39).

It would have been obvious to one of ordinary skill in the art at the time to create the invention of Zargham to include the stateless server as taught by Story et al. in order that "if a client makes a request to a server, and after satisfying that request the server fails and is restarted, the server must be able to handle subsequent related requests from the client without needing to access state data that was lost when the server failed" (Column 1 lines 35-39).

Claim 19

The modified Zargham teaches the method of claim 18 further comprising:

sharing a database among the plurality of application server instances ([Zargham] Column 8 Lines 34-37, "Central repository--refers to a sharable unified capacity such as the operational data store (ODS) with a relational database management system (RDBMS) in the ZLE framework").

Claim 20

The modified Zargham teaches the method of claim 18 wherein starting a plurality of application server instances comprises:

starting, for each instance of the plurality, a dispatcher node and a plurality of server nodes ([Zargham] See Figure 9, ZLE framework).

Claim 21

The modified Zargham teaches the method of claim 18 wherein starting a central service node comprises:

starting a message server having no persistent state (see claim 18 rejection).

Claim 22

The modified Zargham teaches the method of claim 18 wherein organizing comprises:

registering each application server with the messaging server ([Zargham] Column 13 Lines 66-68,"The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations").

Claim 23

The modified Zargham teaches the method of claim 18 further comprising:

conducting inter instance communication through the messaging service ([Zargham] Column 21 Lines 53-55, "Messaging functions in the ZLE framework may involve a simple messaging scenario of an EAI-type request-response situation").

Claim 24

The modified Zargham teaches the method of claim 21 further comprising:

restarting the message server without state recovery responsive to a system failure (See claim 18 rejection).

Claim 25

The modified Zargham teaches the method of claim 22 wherein organizing further comprises:

notifying all registered instances from the message server when an additional instance joins the cluster ([Zargham] Column 13 Lines 66-68,"The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations").

Claim 26

The modified Zargham teaches the system of Claim 1, wherein each application server instance registers with the messaging server ([Zargham] Column 13 Lines 66-68, "The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations").

Claim 27

The modified Zargham teaches the system of Claim 1, wherein inter-instance communications are conducted through the messaging server ([Zargham] Column 21 Lines 53-55, "Messaging functions in the ZLE framework may involve a simple messaging scenario of an EAI-type request-response situation").

Claim 28

The modified Zargham teaches the system of Claim 26, wherein each registered application server instance is notified by the message server when an additional instance registers with the messaging server ([Zargham] Column 13 Lines 66-68, "The robust message store function supports the EAI platform for ZLE hub-based publish and subscribe operations" and Column 14 lines 8-11 "Performing publish and subscribe through the relational database enables the messaging function to leverage the parallelism, partitioning, and built-in manageability of the RDBMS platform).

Response to Arguments

3. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARHAD ALI whose telephone number is (571)270-1920. The examiner can normally be reached on Monday thru Friday, 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Farhad Ali/
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446